

## CLAIMS

1. A method for secure transmissions, the method comprising:

- 2 determining a registration key specific to a participant in a transmission;
- 4 determining a first key;
- 6 encrypting the first key with the registration key;
- 8 determining a second key;
- 10 encrypting the second key with the first key; and
- 12 updating the first and second keys.

2. The method as in claim 1, wherein updating further comprises:

- 2 updating the first key according to a first time period; and
- 4 updating the second key according to a second time period, wherein the second time period is less than the first time period.

3. The method as in claim 2, wherein updating further comprises:

- 2 encrypting an updated first key with the registration key ; and
- 4 encrypting an updated second key with the updated first key.

4. The method as in claim 2, further comprising:

- 2 encrypting a broadcast stream of information using the second key; and
- 4 transmitting the encrypted broadcast stream of information.

5. The method as in claim 4, wherein the broadcast stream of information

- 2 comprises video information.

6. The method as in claim 4, wherein the broadcast stream of information

- 2 comprises Internet Protocol packets.

7. The method as in claim 3, further comprising:

- 2 calculating a registration key information message; and
- 4 transmitting the registration key information message.

8. The method as in claim 7, further comprising:

- 2        calculating a first key information message corresponding to the updated  
            and encrypted first key; and  
4        transmitting the first key information message.

9. The method as in claim 8, further comprising:

- 2        calculating a second key information message corresponding to the  
            updated and encrypted second key; and  
4        transmitting the second key information message.

10. The method as in claim 1, further comprising:

- 2        transmitting the encrypted first key; and  
            transmitting the encrypted second key.

11. A method for secure reception of a transmission, the method comprising:

- 2        receiving a registration key specific to a participant in a transmission;  
4        receiving a first key;  
6        decrypting the first key with the registration key;  
8        receiving a second key;  
            decrypting the second key with the first key;  
            receiving a broadcast stream of information; and  
            decrypting the broadcast stream of information using the second key.

12. The method as in claim 11, further comprising:

- 2        storing the first key in a secure memory storage unit; and  
            storing the second key in a memory storage unit.

13. The method as in claim 11, further comprising:

- 2        recovering the first key from a first key information message; and  
            recovering the second key from a second key information message.

14. The method as in claim 11, further comprising:

- 2        updating the first key according to a first time period; and  
            updating the second key according to a second time period.

15. In a wireless communication system supporting a broadcast service option,

- 2       an infrastructure element comprising:
  - 4           a receive circuitry;
  - 4           a user identification unit, operative to recover a short-time key for decrypting a broadcast message, comprising:
    - 6           processing unit operative to decrypt key information;
    - 6           memory storage unit for storing a registration key; and
  - 8           a mobile equipment unit adapted to apply the short-time key for decrypting the broadcast message.

16. The infrastructure element as in claim 15, wherein the short-time key is

- 2       processed by the user identification unit and passed to the mobile equipment unit.

17. The infrastructure element as in claim 15, wherein the memory storage unit

- 2       is a secure memory storage unit.

18. The infrastructure element as in claim 15, wherein the memory storage unit

- 2       stores a broadcast access key, and wherein the processing unit decrypts the short-time key using the broadcast access key.

19. The infrastructure element as in claim 18, wherein the short-time key is

- 2       updated at a first frequency.

20. The infrastructure element as in claim 19, wherein the broadcast access key

- 2       is updated at a second frequency less than the first frequency.

21. The infrastructure element as in claim 15, wherein the broadcast service

- 2       option is a video service.

22. A wireless communication system, comprising:

- 2       means for determining a registration key specific to a participant in a transmission;

4       means for determining a first key;  
6       means for encrypting the first key with the registration key;  
8       means for determining a second key;  
means for encrypting the second key with the first key; and  
means for updating the first and second keys.

23. An infrastructure element, comprising:

2       means for receiving a registration key specific to a participant in a transmission;  
4       means for receiving a first key;  
6       means for decrypting the first key with the registration key;  
8       means for receiving a second key;  
means for decrypting the second key with the first key;  
means for receiving a broadcast stream of information; and  
means for decrypting the broadcast stream of information using the second key.

24. A digital signal storage device, comprising:

2       first set of instructions for receiving a registration key specific to a participant in a transmission;  
4       second set of instructions for receiving a first key;  
6       third set of instructions for decrypting the first key with the registration key;  
8       fourth set of instructions for receiving a second key;  
fifth set of instructions for decrypting the second key with the first key;  
sixth set of instructions for receiving a broadcast stream of information;  
10       and  
seventh set of instructions for decrypting the broadcast stream of information using the second key.